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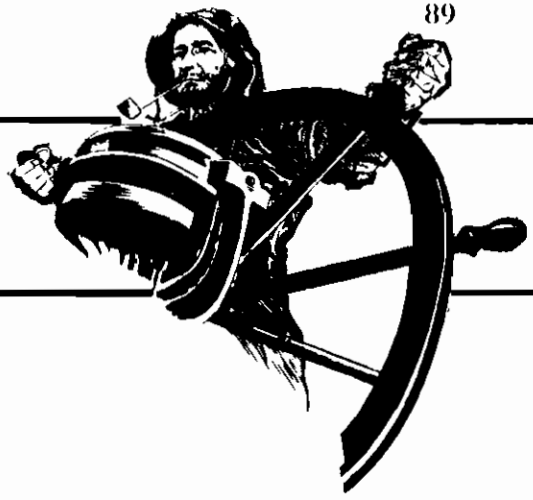
SET AND DRIFT



CRUISE MISSILES: OFFENSE IN BREADTH ADDED TO DEFENSE IN DEPTH*

by

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Historically, a new weapons system has had to offer increased capability in one or more of three areas—range, precision, or destructive power—in order for it to be accepted over existing systems. Trade-offs among these three criteria were permitted and encouraged by the asymmetrical development of the respective technologies. Gaining sufficient warhead size to destroy a given target may have required accepting reduced ranges or accuracy; the ballistic dispersion of long-range delivery may have demanded larger warheads to ensure that the target was brought within the weapon's damage radius; and extended range capabilities, of course, were desired to permit earlier attacks against more targets, even if a smaller warhead were used. As technology progressed (e.g., from smooth-bore casemate guns to stabilized naval rifles triple-mounted in turrets), more desirable balances could be obtained. Large nuclear warheads on ICBMs and tons of iron bombs hung from aircraft compensate for system inaccuracies; a 60-mile range was accepted for Harpoon to permit firing a weapon with a 500-pound warhead from existing AAW launchers.

The new generation of cruise missiles offers a system to permit destruction of hard and heavily defended targets at long range, without the cost and collateral damage of ballistic missiles or manned aircraft. Cruise missiles can never totally replace aircraft or ballistic missiles for all targets because of the restrictive trade-offs among sophistication, speed, warhead, and range which must be made when designing a missile for a launcher of fixed size and the missile's inapplicability for missions against large areas, dispersed/hidden targets, and targets demanding a high level of discrimination or damage assessment.

The United States, as a maritime nation surrounded by oceans and with

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overseas interests critical to its survival, depends upon continued use of the ocean for its economic well-being in peacetime and for the movement of large quantities of aircraft, armor, munitions, troops, and supplies in time of war. Our principal potential enemy, primarily a landpower with territorial buffer zones and limited strategic dependence on the oceans in wartime, can build a navy which emphasizes sea denial forces to inhibit our use of the seas. Over the past 30 years, peacetime measures of efficiency and economies of scale have driven the U.S. Navy to ever larger platforms, concentrating capabilities into fewer units. New systems have been justified time and again on the greater quantity of old ones they would replace. Meanwhile, guided munitions fired from durable platforms—first the homing torpedo and manned aircraft, later the long-range cruise missile—have forced us into increasingly defensive tactical concentrations. Through a generation of tactical and procurement measures we have provided defense in depth for our high-value ships. As a result, surface combatant ships and (more recently) submarines have lost their desirable mobility to become escorts in a diminishing number of task groups.

A few concentrations of valuable and heavily defended ships may constitute the most efficient force structure when viewed within peacetime programs, but they fall far short of meeting requirements of war in which attrition is a reality. The discriminating surveillance permitted by today's technology gives the cruise missile the ability to destroy or severely damage even the largest of ships with a single conventional or nuclear weapon. This one-shot kill ability is of greater significance now than when it took weeks to find the enemy and months to deploy a force that could destroy him. To balance the situation, an immediate requirement exists to provide the capability to fire cruise missiles from our own ships, surface and submerged. Forces so equipped can then be operated at a greater distance from tactical airbases or independently, thus assuming the character of mobile armor rather than massed infantry guarding their artillery. Air cover is most desirable for surveillance and targeting, but the aircraft performing these supporting functions need not have the high-performance characteristics required for air superiority. These aircraft may be either organic to the surface force (V/STOL, including LAMPS, or even RPVs (Remotely Piloted Vehicles)) or provided from larger airbases ashore or afloat. Of course, the carriers (and all valuable ships) will still require defenses, but letting SLCM-armed (Ship-Launched Cruise Missile) ships operate well ahead of them—just as the ALCM (Air-Launched Cruise Missile) and SRAM (Short-Range Attack Missile) would do for the B-52 and B-1 today—would permit the force of these intensive power projection units to be husbanded until they are needed and not risked in the early days of a conflict before the political objectives, levels of commitment, rules of engagement, and alliances on both sides have been ascertained.

Changes to tactical employment and deployment policies can be accomplished rather quickly. The availability of cruise missile technology to the navies of both sides has implications for change to force structure and ship design which will require substantial time and other resources to effect. Considerations of budget stability simply do not permit casting out the old and starting anew, even if desired. A credible future navy must have survivable war-fighting capabilities, apparent and real, against land-based systems, even after expected attrition. Such a force must include many more multimission ships, similar in concept to those built during past wars when the painful lessons of attrition were re-

learned. If such a force restructure were attempted, while holding constant or increasing current capabilities, then this new navy of dispersed capabilities would be much larger; very costly to build, man, and maintain; and extremely demanding of technology—a combination of factors arguing strongly for retention of some quantity of large carriers and support ships not too different from those at sea today.

Several superjacent issues (moral, strategic, political and economic) are now combining to inhibit progress in cruise missiles. For years others have deployed similar weapons, including ones which could cause greater damage than those we now have in development. No agreement sought nor unilateral action taken should prevent the addition of a missile-firing system to U.S. ships. Intentions can change overnight; attaining true capabilities takes years. If programs are not pursued today, then the moralists, strategists, economists and politicians who will be responsible for this nation's well-being in future years may be forced to select from a dangerously narrow range of options in discharging their responsibilities.